



ON THE WATER FRONT



We hear a lot these days about "re-engineering an organization." The phrase may be overused, but it does accurately describe the process of changing the way an organization operates to allow it to provide better service and operate more efficiently.

Tucson Water serves more than 600,000 customers with water every day and provides all the customer service, maintenance, financial planning, and new construction that goes with operating a large utility. I believe we do a good job of it. I also believe we can do a better job. That's why I recently brought together a group of professionals in Tucson Water to begin a "re-engineering" process for the utility. It is essential that we take a critical look at ourselves and our work practices and make appropriate changes.

This is a critical time for our community – a time when we must work together to protect our environment for future generations by understanding that water is a precious resource in the desert and that we must use all our water resources wisely. All of us must learn to operate a little differently – using more of our reclaimed wastewater, blending recharged Colorado River water with our groundwater, and being better at water conservation. I want you to know that Tucson Water will also be working to learn new ways of operating and better ways of serving you.

This process of change at Tucson Water will take some time, but when it is complete, you – our customers – will benefit from a water utility that is revitalized, that is even more valuable to the community, and is better than ever at delivering the services and the product you want. Our goal is to exceed your expectations.

*David Modeer
Director, Tucson Water*

Water Main Replacement And Rehabilitation Program Making Progress

A major improvement to your water system is nearly 70% finished. Tucson Water has been replacing or rehabilitating more than 200 miles of old water mains. These mains have been used to deliver water for as long as 50 years and most are simply worn out. Galvanized

been used to deliver water for as long as 50 years and most are simply worn out. Galvanized steel water mains are being replaced with new PVC (plastic) pipes. Old cast iron mains are being cleaned and lined with concrete while they are still in the ground. Lining these mains makes them better than new without having to tear up streets or compact the ground – especially important in older, historic neighborhoods where most of these iron mains are located.

Prior to beginning each project, neighborhood residents and businesses are notified and invited to attend a neighborhood meeting to learn more about the work that will be done on their street. Tucson Water stays in close touch with them during construction and works hard to minimize impacts to residents. Surveys conducted with neighbors after the work in their area was complete show that the majority of customers are quite pleased with their new water system and with the way the project was handled.

To date, we've replaced about 135 miles of galvanized steel mains and rehabilitated about 17 miles of cast iron mains, leaving about 60 miles of old mains yet to do. We expect to be finished with the Main Replacement and Refurbishment Program by the end of the year 2000. If you have questions about this program or replacements being done in your neighborhood, please call Tucson Water at 791-2648.

Spring Water Project Tours

Spring is a great time to get outdoors and see the world, or at least your community's water projects.

Tucson Water offers free guided tours of water recharge projects, the CAP Water Treatment Plant, and Sweetwater Wetlands. Upcoming tours are scheduled for:

- Thursday, April 8th** to CAP Treatment Plant & Central Avra Valley Storage and Recovery Project (CAVSARP)
- Saturday, April 17th** to CAP Treatment Plant & Pima Mine Road Recharge Project
- Tuesday, April 27th** to Sweetwater Wetlands
- Wednesday, May 12th** to CAP Treatment Plant & CAVSARP
- Saturday, May 22nd** to Sweetwater Wetlands

Tours last from 2 to 3 hours, depending on tour site. Walking shoes and sun hats are advised.

For information about time and meeting place, please call Cate Bradley at 791-5080 ext. 461.

Coliform Bacteria Testing Results

January 1999

Click this box to see the graphic representation of the January 1999 Groundwater Quality Report. (When you are finished there, you will need to use your browser's BACK button to return to this page)

To give you a more accurate measurement of the water quality in your neighborhood, the Tucson Water service area has been divided into 10 zones based on differences in water pressure and water quality. For a detailed description of the zone boundaries, call 791-4331.

One part per million (ppm) is the same as one second of time in 11.6 days.

Why should bacteria count matter to me?

Millions of people around the world suffer from waterborne diseases caused by bacteria. This is rare in the United States, where most water utilities disinfect the water and monitor and test for microorganisms. Tucson Water adds a sufficient level of chlorine to keep the groundwater we use safe for drinking, cooking and bathing.

What's a coliform, anyway?

Coliforms are bacteria which are not harmful themselves but may indicate the presence of other, potentially harmful bacteria.

Why should the chlorine level in my water matter to me?

Chlorine kills bacteria and germs that can grow in drinking water and prevents waterborne disease. Chlorine is the most widely used water disinfectant in North America. Tucson Water continually tests water at more than 240 locations to make sure chlorine levels stay within the target range.

Groundwater Quality Report

January 1999

| Water Quality Zone | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | System Wide |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|
| Sodium (ppm) | Average | 54 | 43 | 47 | 34 | 32 | 32 | 30 | 42 | 48 | 40 | 39 |
| | Range | 38-82 | 33-50 | 18-97 | 26-47 | 24-45 | 24-40 | 18-38 | 36-58 | 38-88 | 38-43 | 18-97 |
| Mineral Content (ppm) | Average | 359 | 299 | 321 | 216 | 219 | 230 | 231 | 325 | 279 | 222 | 264 |
| | Range | 198-564 | 221-334 | 186-621 | 181-266 | 163-317 | 182-290 | 167-307 | 220-479 | 213-360 | 210-232 | 163-621 |
| Hardness (ppm) | Average | 160 | 140 | 148 | 93 | 98 | 106 | 115 | 160 | 105 | 79 | 119 |
| | Range | 66-267 | 98-178 | 72-301 | 66-126 | 71-137 | 75-134 | 81-157 | 84-295 | 73-127 | 72-88 | 66-301 |
| pH (units) | Average | 8.0 | 8.2 | 8.0 | 8.1 | 7.9 | 7.8 | 8.0 | 7.9 | 8.0 | 8.0 | 8.0 |
| | Range | 7.7-8.5 | 8.0-8.4 | 7.3-8.5 | 7.9-8.3 | 7.2-8.3 | 7.2-8.4 | 7.6-8.3 | 7.5-8.2 | 7.8-8.3 | 7.9-8.3 | 7.2-8.5 |
| Temperature (deg F) | Average | 70 | 70 | 68 | 73 | 70 | 67 | 67 | 70 | 73 | 68 | 69 |
| | Range | 64-78 | 61-76 | 61-74 | 64-83 | 59-81 | 57-75 | 61-75 | 63-79 | 64-83 | 61-73 | 57-83 |

What does all this mean to me?

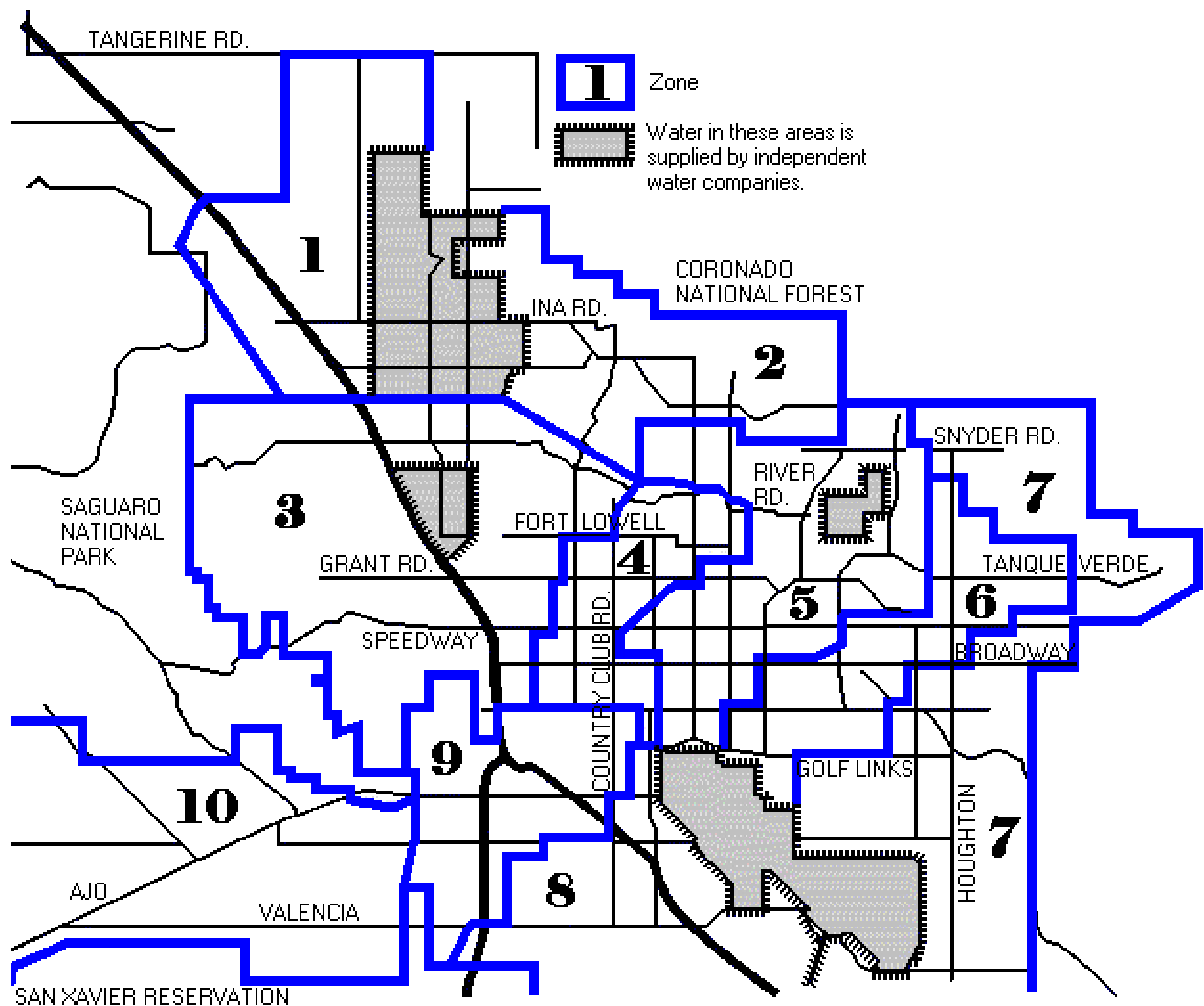
Sodium. The American Heart Association recommended standard for daily sodium intake is 3,000 milligrams. In general, the amount of sodium ingested from drinking water is a small part of a person's overall dietary intake. People on severely restricted sodium diets may want to consult their health care provider about sodium levels in their water.

Mineral content measures the amount of total dissolved solids, or **TDS**, in the water.

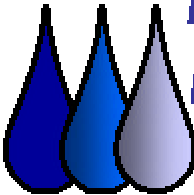
Mineral content can often affect the taste of the water. For example, many people can detect a salty taste when TDS is above 500 parts per million. The federal government has recommended an aesthetic standard of 500 ppm or less for mineral content in drinking water.

Hardness measures the ease with which soap can be lathered. The softer water is, the more easily it produces a soap lather. Water hardness also determines the degree of water spotting on dishes, plumbing fixtures and bath areas. In addition, most home water conditioners are set based on the hardness of the water entering the home. For the most part, Tucson's groundwater is considered moderately hard.

pH. Swimming pool chemistry, some fish aquariums and ponds, and certain water conditioner systems require you to control the pH of the water. pH is a measurement of acidity. Waters with a pH below 7.0 are considered acidic. The federal secondary, or aesthetic, standard for pH is 6.5 to 8.5.



The information shown on this map was collected at 245 sampling points for hardness, mineral content, pH and temperature and 244 sampling points for sodium.

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|  TUCSON WATER | <p><i>The Water Connection</i> is produced by Tucson Water. To receive a copy, or to receive this information in Spanish, call 791-4331 or mail your request to: Customer Information P.O. Box 27210 Tucson, AZ 85726-7210</p> | <p>City of Tucson TTY number: 791-2639</p> <p>Si usted desea este documento escrito en español, por favor, llame al 791-4331.</p> |
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